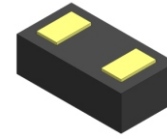


CPDWL5V0SPC-HF

Ultra small SMD package

RoHS Device

Halogen Free



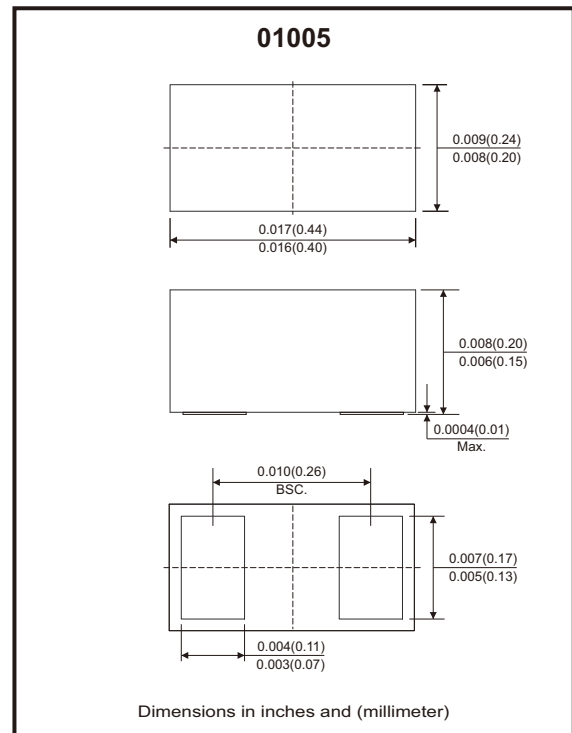
Features

- Bi-directional ESD protection.
- Surface mount package.
- High component density.
- Low clamping voltage.
- Low leakage.
- Ultra-low capacitance: < 0.3 pF.

Mechanical data

- Case: 01005 package, molded plastic.
- Mounting position: Any.

Circuit Diagram



Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu\text{s}$	P_{PP}	35	W
Peak pulse current	$T_P = 8/20\mu\text{s}$ (Note 1)	I_{PP}	2.5	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact) (Note 2)	ESD	± 15 ± 12	kV
Operating junction temperature range		T_J	-40 to +125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-55 to +150	$^\circ\text{C}$

Notes: 1. Stress pulse: 8/20 μs current waveform according to IEC 61000-4-5.
2. ESD according to IEC 61000-4-2.

Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V_{RWM}			5	V
Breakdown voltage	$I_T = 1\text{mA}$	V_{BR}	6			V
Reverse leakage current	$V_{RWM} = 5\text{V}$	I_R		1	100	nA
Clamping voltage	$I_{PP} = 1\text{A}$, $T_P = 8/20\mu\text{s}$	V_C			11	V
	$I_{PP} = 2.5\text{A}$, $T_P = 8/20\mu\text{s}$ (Note 1)				14	
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J		0.2	0.3	pF

Notes: 1. Stress pulse: 8/20 μs current waveform according to IEC 61000-4-5.

Typical Rating and Characteristic Curves (CPDWL5V0SPC-HF)

Fig.1 - 8/20μs Peak Pulse Current
Waveform Acc. IEC 61000-4-5

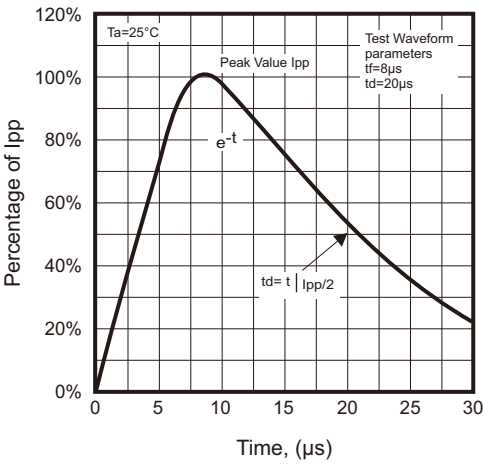


Fig.2 - Power Rating Derating Curve

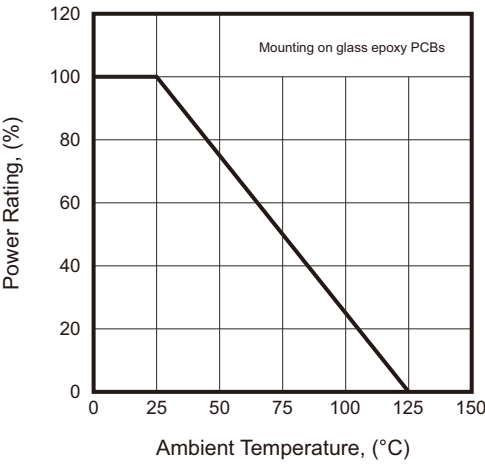


Fig.3 - Typical Capacitance Between
Terminals Characteristics

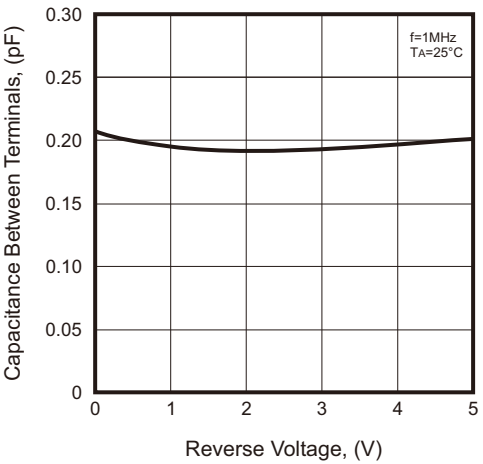
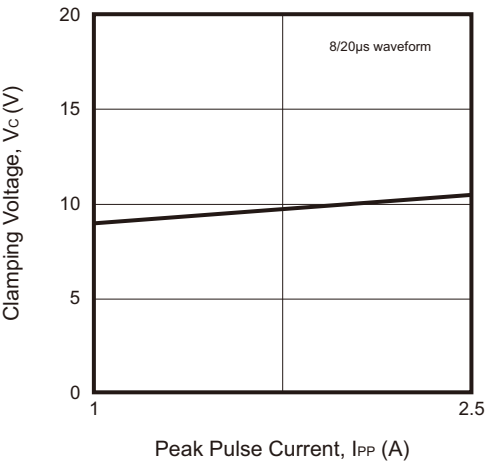
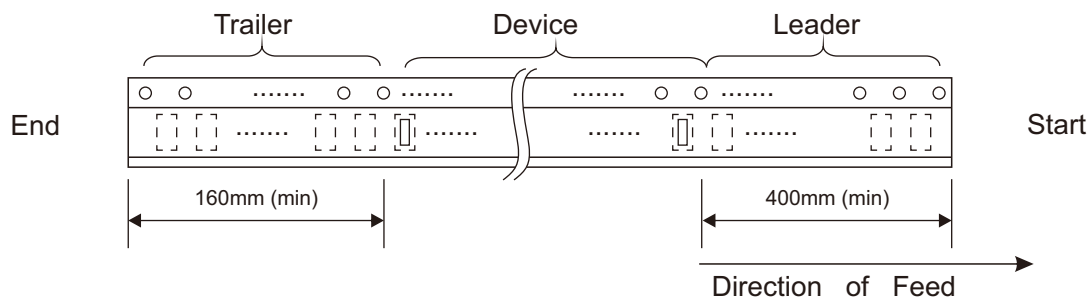
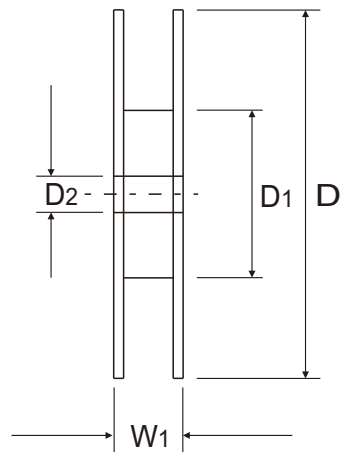
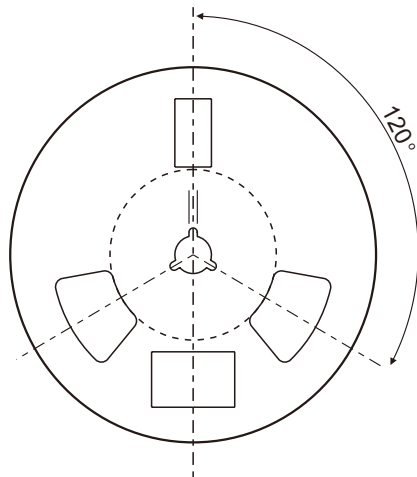
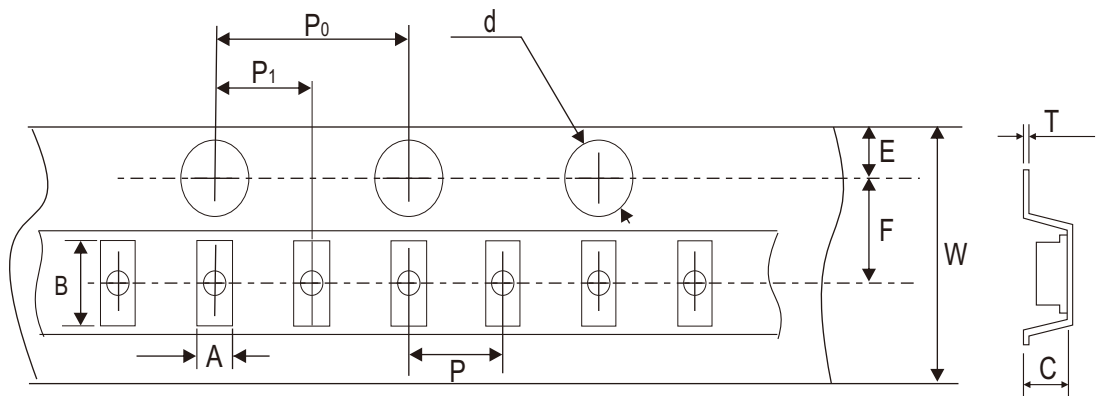


Fig.4 - Typical Clamping Voltage vs.
Peak Pulse Current



Reel Taping Specification



01005	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.27 ± 0.02	0.49 ± 0.02	0.215 ± 0.02	$1.50^{+0.10}_{-0.00}$	178.00 ± 1.00	60.00 ± 0.50	13.00 ± 0.50
	(inch)	0.011 ± 0.001	0.019 ± 0.001	0.008 ± 0.001	$0.059^{+0.004}_{-0.000}$	7.008 ± 0.039	2.362 ± 0.020	0.512 ± 0.020

01005	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.05	$8.00^{+0.30}_{-0.10}$	11.50 ± 0.50
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.002	$0.315^{+0.012}_{-0.004}$	0.453 ± 0.020

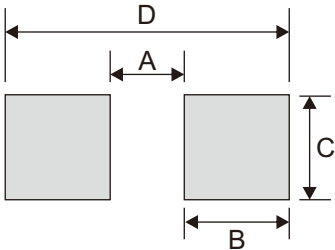
Marking Code

Part Number	Marking Code
CPDWL5V0SPC-HF	A



Suggested P.C.B. PAD Layout

SIZE	01005	
	(mm)	(inch)
A	0.12	0.005
B	0.17	0.007
C	0.17	0.007
D	0.46	0.018



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
01005	10,000	7